

CLAIMS:

1. A method to perform voice detection, comprising:
receiving a frame of information; and
determining whether said frame comprises voice information using a fuzzy logic algorithm.
2. The method of claim 1, wherein said determining comprises:
measuring at least one characteristic of said frame; and
generating at least one frame value based on said measurements.
3. The method of claim 2, wherein said frame value is an estimate of an energy level.
4. The method of claim 3, wherein said determining further comprises:
receiving at least one frame value;
comparing said frame value with a threshold parameter;
assigning a fuzzy logic value to said frame based on said comparison; and
determining whether said frame comprises voice information based on said fuzzy logic value.
5. The method of claim 4, wherein said determining whether said frame comprises voice information based on said fuzzy logic value comprises:

comparing said fuzzy logic value with a class indicator value; and
determining whether said frame comprises voice information in accordance with
said comparison of said fuzzy logic value and said class indicator value.

6. The method of claim 1, wherein said receiving comprises:

receiving said frame of information;
receiving an echo cancellation reference signal;
canceling echo from said frame of information; and
sending said frame of information to a voice activity detector.

7. The method of claim 1, further comprising:

determining that said frame comprises voice information; and
notifying an application system that said frame comprises voice information.

8. A system, comprising:

an antenna;
a receiver connected to said antenna to receive a frame of information;
an echo canceller connected to said receiver to cancel echo; and
a voice activity detector to detect voice information in said frame using a fuzzy
logic algorithm.

9. The system of claim 8, further comprising a transmitter to provide an echo
cancellation reference signal to said echo canceller.

10. The system of claim 8, where said voice activity detector further comprises:
an estimator to estimate energy level values; and
a voice classification module connected to said estimator to classify information for said frame.
11. The system of claim 10, wherein said voice classification module assigns fuzzy logic values to said frame based on energy level values, and determines whether said frame comprises voice information using said fuzzy logic values.
12. A voice activity detector, comprising:
an estimator to estimate energy level values; and
a voice classification module connected to said estimator to classify information for said frame.
13. The voice activity detector of claim 12, wherein said voice classification module assigns fuzzy logic values to said frame based on energy level values, and determines whether said frame comprises voice information using said fuzzy logic values.
14. The voice activity detector of claim 13, wherein said voice classification module compares said fuzzy logic values to class indicators, and determines whether said frame comprises voice information in accordance with said comparison.

15. An article comprising:
- a storage medium;
- said storage medium including stored instructions that, when executed by a processor, result in performing voice detection, by receiving a frame of information, and determining whether said frame comprises voice information using a fuzzy logic algorithm.
16. The article of claim 15, wherein the stored instructions, when executed by a processor, further results in said determining by measuring at least one characteristic of said frame, and generating at least one frame value based on said measurements.
17. The article of claim 16, wherein the stored instructions, when executed by a processor, further results in generating said at least one frame value by estimating an energy level.
18. The article of claim 17, wherein the stored instructions, when executed by a processor, further results in said determining by receiving at least one frame value, comparing said frame value with a threshold parameter, assigning a fuzzy logic value to said frame based on said comparison, and determining whether said frame comprises voice information based on said fuzzy logic value.
19. The article of claim 18, wherein the stored instructions, when executed by a processor, further results in determining whether said frame comprises voice information

based on said fuzzy logic value by comparing said fuzzy logic value with a class indicator value, and determining whether said frame comprises voice information in accordance with said comparison of said fuzzy logic value and said class indicator value.

20. The article of claim 15, wherein the stored instructions, when executed by a processor, further results in said receiving by receiving said frame of information, receiving an echo cancellation reference signal, canceling echo from said frame of information, and sending said frame of information to a voice activity detector.

21. The article of claim 15, wherein the stored instructions, when executed by a processor, further results in determining that said frame comprises voice information, and notifying an application system that said frame comprises voice information.

22. A method to perform voice detection, comprising:
receiving a frame of information; and
determining whether said frame comprises voice information using at least one frame value and comparing said frame value to a spectrum of values indicating degrees of truthfulness.

23. The method of claim 2, wherein said frame value is an estimate of an energy level.